

What is claimed is:

1. An apparatus for recording an image by scanning a
photosensitive medium with a light beam generated based on
an image signal, comprising:

recording duty cycle detecting means for detecting a
recording duty cycle of an image to be recorded on the pho-
tosensitive medium based on the image signal; and

light beam intensity modulating means for modulating
the intensity of the light beam based on the detected re-
cording duty ratio.

2. An apparatus according to claim 1, wherein said pho-
tosensitive medium is of such a nature that an area irradi-
ated with light remains as an image, and said light beam in-
tensity modulating means comprises means for modulating the
intensity of the light beam to a higher level in a highlight
area of the image.

3. An apparatus according to claim 2, wherein said
highlight area comprises a highlight area smaller than 25 %
of all gradations of the image recorded on said photosensi-
tive medium.

4. An apparatus according to claim 1, wherein said re-
cording duty cycle detecting means comprises a low-pass fil-
ter.

5. An apparatus according to claim 1, wherein said recording duty cycle detecting means comprises means for detecting a recording duty cycle corresponding to a given area in the image recorded on said photosensitive medium.

6. An apparatus according to claim 5, further comprising:

random number applying means for varying the position of the given area in the image with a random number.

7. An apparatus according to claim 5, further comprising:

random number applying means for varying the size of the given area in the image with a random number.

8. An apparatus according to claim 5, wherein said light beam intensity modulating means comprises random number applying means for applying a random number to the detected recording duty cycle, and means for modulating the intensity of the light beam based on the recording duty cycle to which the random number is applied by said random number applying means.

9. An apparatus according to claim 1, wherein said light beam comprises a plurality of light beams for simultaneously scanning said photosensitive medium to record the

image thereon, and wherein said recording duty ratio detecting means comprises a plurality of recording duty ratio detecting means associated respectively with images recorded on the photosensitive medium based on respective image signals to generate said light beams, and said light beam intensity modulating means comprises a plurality of light beam intensity modulating means associated respectively with recording duty ratios detected by said recording duty ratio detecting means.

10. An apparatus according to claim 1, wherein said light beam comprises a plurality of light beams for simultaneously scanning said photosensitive medium to record the image thereon, and wherein said recording duty ratio detecting means comprises means for determining an average recording duty ratio of images recorded on the photosensitive medium based on respective image signals to generate said light beams, and said light beam intensity modulating means comprises means for modulating the brightnesses of said light beams based on said average recording duty ratio.

11. An apparatus for recording an image by scanning a photosensitive medium which is fed in an auxiliary scanning direction, with a light beam generated based on an image signal in a main scanning direction substantially perpendicular to said auxiliary scanning direction, comprising:
present recording duty cycle detecting means for de-

detecting a present recording duty cycle of an image to be recorded on the photosensitive medium based on the image signal;

5 light beam intensity modulating means for modulating the intensity of the light beam based on the detected present recording duty ratio;

preceding recording duty cycle detecting means for detecting a preceding recording duty cycle of the image at a position scanned later than said present recording duty cycle detecting means in the main scanning direction; and

10 intensity modulation correcting means for comparing the detected preceding recording duty cycle and the detected present recording duty cycle to correct the modulation of the intensity of the light beam with said light beam intensity modulating means.

15 12. An apparatus according to claim 11, wherein said photosensitive medium is of such a nature that an area irradiated with light remains as an image, and said light beam intensity modulating means comprises means for modulating the intensity of the light beam to a higher level in a highlight area which is smaller than 25 % of all gradations of the image.

20 13. An apparatus according to claim 12, wherein said preceding recording duty cycle is of a value corresponding to the highlight area which is smaller than 25 % of all gra-

dations of the image, and said present recording duty cycle is of a value corresponding to an area except the highlight area which is smaller than 25 % of all gradations of the image, and wherein said intensity modulation correcting means comprises means for correcting the modulation of the intensity of the light beam to cause the intensity of the light beam to return from a given position in the highlight area to a normal intensity.

10 14. A method of recording an image by scanning a photosensitive medium with a light beam generated based on an image signal, comprising the steps of:

15 detecting a recording duty cycle of an image to be recorded on the photosensitive medium based on the image signal; and

modulating the intensity of the light beam based on the detected recording duty ratio.

20 15. A method according to claim 14, wherein said photosensitive medium is of such a nature that an area irradiated with light remains as an image, and said step of modulating the intensity of the light beam comprises the step of modulating the intensity of the light beam to a higher level in a highlight area which is smaller than 25 % of all gradations of the image.